

Claim Rejections - 35 USC 102

Claims 1, 3-4, 6-7 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Saito et al (6,782,717). This rejection is traversed for at least the following reasons.

The Examiner substantially repeats the basis for rejection in the first Office Action, asserting that Saito et al teach a method comprising the steps of polishing glass substrate (18), a treating liquid (col. 4, lines 1-4 (colloidal particles) and col. 11, lines 29-31 (shows a liquid being pure water), a tape (23), disturbance of the texture is reduce (note the pure water for cleaning the glass substrate reads on this limitation), a magnetic layer (col. 7, lines 28-30), and a texture being formed along a circumference direction of the magnetic disk (abstract).

In the Response to Arguments section, at pages 4 and 5, the Examiner asserts that the added step involves cleaning a substrate with pure water after a polishing process, and that Saito et al discloses in par. 75 that there are no particular limitations on the washing method. Thus, the Examiner asserts that adding a step of cleaning a substrate with pure water after polishing would have been within the technical grasp leading the anticipated success yielding predictable results.

However, Applicants submit that the Examiner is not focusing on all of the limitations in independent claims 1 and 6 and the invention as an entire process for preparing a glass substrate or a magnetic disk having such substrate, using a sequence of specific steps, as compared to the teachings in Saito.

Sequence of Supplying Liquid

In Saito, the treating liquid (col. 4, lines 1-4 (colloidal particles)) is the abrasion material used in the chamfering step before the texture is formed. Thus, this treating liquid is not used after the texture is formed. This fact is apparent from the description in Saito at col. 3 line 53-col. 4 line 4.

By contrast, according to the present invention recited in claims 1 and 6, the pure water (treating liquid) is supplied onto the principal surface of the glass substrate after the texture is formed on the principal surface of the glass substrate. This provides a wholly different effect and solves a different problem, as would be understood by one skilled in the art. Specifically,

with the invention, it is possible to prevent adhesion of foreign matter during cleaning so that the uniformly textured surface is formed. This makes it possible to realize the high magnetic anisotropy. These goals are not considered or achieved in Saito.

Specifically, according to the claimed invention, the disturbance of the texture formed on the principal surface of the glass substrate is reduced. The surface roughness of the texture has the specific range, i.e., Rmax of 5 nm or less and Rp of 3 nm or less, Rmax representing a maximum height and Rp representing a maximum peak height, respectively.

This result is not achieved in Saito because the steps as claimed are not performed in Saito.

No Tape for Cleaning

In Saito, the tape 23 (namely, the texture formation tape) is used to form the texture, as described at col. 5 line 66-col. 6 line 7. The tape is not used to clean the principal surface of the glass substrate.

By contrast, according to the present invention as expressly recited in claims 1 and 6, the tape is used to clean the principal surface of the glass substrate, not to form the texture. This is a totally different purpose for the step, which is conducted at a different point in the several steps of the process. There can be no anticipation in the absence of such sequence of steps as expressly claimed.

No Teaching of Express Range

In the Response to Arguments, the Examiner asserts that Saito discloses values within this range and the actual range, with reference to the text at col. 5, lines 45-53 and col. 6, lines 58-67 and col. 9, lines 66-67 and col. 10, lines 27-34. and claim 8.

However, Applicants submit that Saito fails to disclose the specific range, as expressly stated in the claims that define the present invention, i.e., Rmax of 5 nm or less and Rp of 3 nm or less, Rmax representing a maximum height and Rp representing a maximum peak height, respectively.

Specifically, at col.5, lines 45-53, only the average roughness Ra is disclosed but Rmax and Rp are not disclosed.

At col. 6, lines 58-67, only the removal depth is, disclosed but Rmax and Rp are not disclosed.

At col. 9, lines 66-67 and col.10, lines 27-34, only the maximum depth is disclosed, but Rmax and Rp are not disclosed. As would be understood by one skilled in the art reading the reference, the maximum depth in Saito represents the acid resistance index and clearly differs from Rmax representing a maximum height and Rp representing a maximum peak height.

No Anticipation

As discussed above, Saito clearly fails to disclose or suggest several express limitations of the present invention as defined in claims 1 and 6. Thus, under the fundamental principles of U.S. law, the claims cannot be anticipated. The decision in KSR is not relevant to anticipation. Moreover, due to the absence of specific steps in the claimed sequence, the invention is clearly patentable over Saito.

Claim Rejections - 35 USC 103

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al (6,782,717) in view of Shimada (6,632,547). This rejection is traversed for at least the following reasons.

Saito et al is discussed and distinguished above. The Examiner admits that Saito et al does not teach chemical strengthened glass substrates.

Shimada does not remedy the additional deficiencies of Saito et al, as noted above and in the previous Amendment. Thus, this rejection is overcome, at least for the reasons given with regard to the rejection under Section 102.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al (6,782,717) in view of Saito et al (2003/0110803A1).

Saito et al is discussed and distinguished above. The Examiner admits that Saito et al does not teach chemical strengthened glass substrates.

Saito et al '803 does not remedy the additional deficiencies of Saito et al, as noted above. Thus, this rejection is overcome, at least for the reasons given with regard to the rejection under Section 102.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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